(No Model.)

L. HEN & R. WEINMANN.

ELECTRIC IGNITING APPARATUS.

No. 382,231. Patented May 1, 1888.

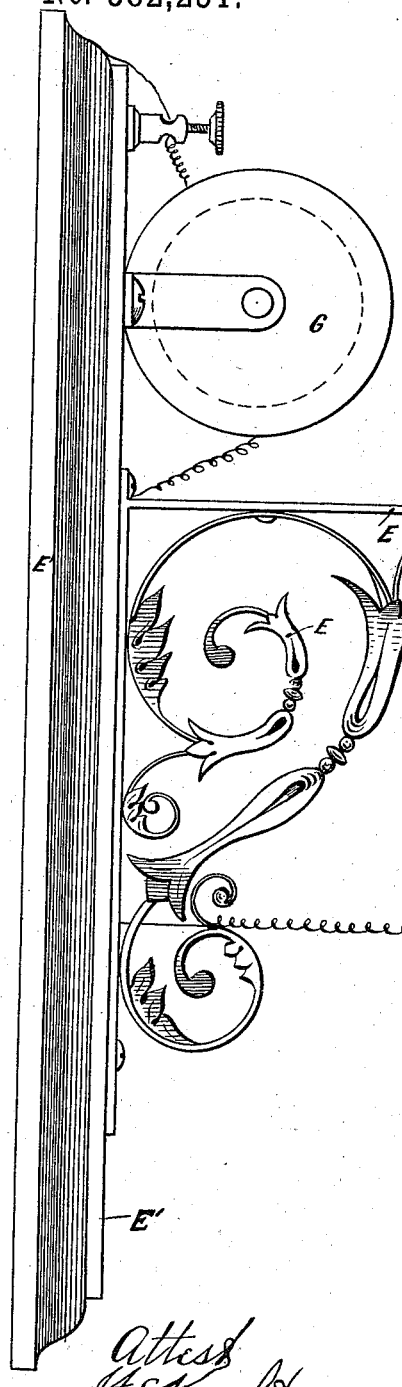

Fig. 1.

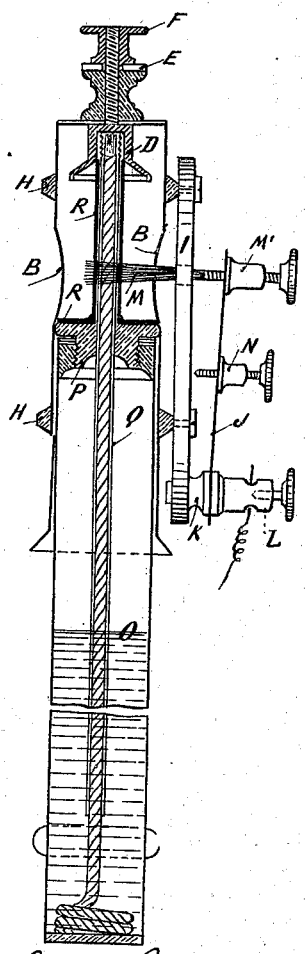

Fig. 2.

Attest
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UNITED STATES PATENT OFFICE.

LÉON HEN AND RODOLPHE WEINMANN, OF BRUSSELS, BELGIUM.

ELECTRIC IGNITING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 382,231, dated May 1, 1888.

Application filed February 7, 1888. Serial No. 263,217. (No model.) Patented in Belgium January 5, 1888, No. 59,593, and in England January 19, 1888, No. 873.

To all whom it may concern:

Be it known that we, LÉON HEN and RODOLPHE WEINMANN, both of Brussels, in the Kingdom of Belgium, manufacturers, have invented new and useful Improvements in Electric Igniting Apparatus, (for which no patent has been obtained in any country except in Belgium on January 5, 1888, No. 59,593, and in England on January 19, 1888, No. 873,) of which the following is a specification.

This invention relates to an electric igniting apparatus in which a small wick saturated with alcohol or other inflammable liquid is ignited automatically by the rubbing of the wick-holder against an electric brush.

We will proceed to describe the said apparatus with reference to the accompanying drawings, in which—

Figure 1 shows an elevation, and Fig. 2 a vertical section taken at right angles to Fig. 1.

The apparatus consists of a casing, A, having two openings, B, situated opposite each other, and at the lower part it has a spring-tongue, C, cut in it. The casing A is formed with an open socket at bottom, and it contains in its upper end an extinguisher, D, fixed by a screw, which at the same time serves to secure the apparatus to a bracket, E, by means of a milled nut, F. The bracket E is fixed to a board, E′, which carries a resistance-coil, G. The casing A has two circular ribs, H H, against which bears a plate, I, of ebonite or other insulating material, on which is fixed a spring brush-carrier, J, formed of a flexible brass or copper blade held between a washer, K, and a contact-post, L, and which carries at its middle an adjusting-screw, N, bearing against the insulating-plate I, while at its free end it carries a contact-brush, M, secured on the end of a screw passing through an internally-screwed brush, M′, fixed on the blade J. The brush M passes through the insulating-plate I and through one of the openings B to the center of the casing.

The second part of the apparatus consists of a lamp having a wick saturated with alcohol or other liquid. This lamp is formed of a cylindrical receptacle, O, forming the body of the lamp, and of a wick-carrier consisting of a screwed plug, P, through which passes a tube, Q, containing the wick. The upper part of the plug and the outer surface of the tube up to a certain height are covered with a suitable insulating material, R, and the extremity of the tube Q, which is not covered with the insulating material, is corrugated or roughened. The diameter of the lamp-casing O is such that it fits exactly into the socket of the casing A, which is made trumpet-mouthed at its lower end for facility of insertion. When the lamp O is introduced into the casing A, the spring C presses against it and holds it in position.

The apparatus operates as follows: The one pole of the battery is connected to the post L, while the bracket E, and consequently the casing A, are connected to the other pole through the resistance-bobbin G. When the lamp is introduced entirely into the socket of A, the brush M is in contact with the insulating material R, which surrounds the wick-tube, and the current is consequently interrupted; but if the lamp is drawn downward for disengaging it from the socket, the brush rubs against the roughened end of the wick-tube, whereby the circuit is closed, passing through the brush M, tube Q, plug P, lamp-casing O, and casing A. The roughening or corrugations on the wick-tube produce sparks by the rubbing action of the brush, and when the extremity of the tube arrives in contact therewith these sparks ignite the wick. For facilitating such ignition the extremity of the tube is cut or notched so as to form teeth, so that in the spaces between the teeth the wick comes in contact with the sparks and ignites. The wick being once ignited, the lamp can be transported to wherever required. When it is no longer required for use, it is sufficient to push it into the socket A again until the extremity of the wick-tube passes into the extinguisher D, which thus extinguishes the flame. The insulated covering R abuts closely against the extinguisher D, and thus prevents evaporation of the inflammable liquid contained in the lamp.

The extinguisher has another advantageous effect, which is as follows: When the lamp has not been used, after a certain length of time the alcoholic vapors will have accumulated in the interior of the extinguisher, and when the

lamp is drawn downward the tube Q, constituting a piston, draws down these vapors in passing out of the extinguisher, and thus fills the upper part of the casing A therewith, so that when the electric sparks are produced by the contact of the brush and the roughened part of the tube Q these vapors are ignited and the ignition of the wick is facilitated.

Although, as above described, this apparatus consists, essentially, of the combination of a socket with insulated contact-brush and a lamp with a wick-tube which is partly of insulating material, it will be understood that both the casing A and the separate apparatus each constitute separately our invention. Thus it may be convenient to have a single socket with contact-brush and several lamps, so that according to our invention a single casing with contact-brush may be used either in combination with only a single lamp or with any number thereof, or, conversely, a single lamp may be used in combination with a number of the casings and contact-brushes fixed at different localities.

Our above-described apparatus has the advantage over others heretofore employed, in that it can be manipulated by means of one hand alone.

Having thus described our said invention and in what manner the same has to be performed, what we claim is—

1. Electric igniting apparatus consisting of a casing or holder connected to the one pole of a generator of electricity and carrying an insulated contact-brush connected to the other pole of the generator of electricity, and an extinguisher, such casing being adapted for the reception of a lamp, and so arranged in conducting connection therewith that in withdrawing the lamp from the casing the wick-tube of the lamp makes electrical contact with the brush, producing sparks, whereby the lamp is ignited, substantially as herein described.

2. The combination, with a socket having an insulated contact-brush, and connections between said socket and brush, and suitable supply, of a lamp having a wick-holder adapted to complete circuit between said socket and brush, said wick-holder being insulated from the contact-brush except at its end, as and for the purpose set forth.

3. In an igniting apparatus, substantially as herein described, the combination, with the socket A, having insulated contact-brush M, extinguisher D, and spring C, of a lamp, O, having wick-tube Q, covered with insulation R for a portion of its length, adapted to slide in and out of said socket, and held in position by said spring C, as herein set forth.

4. The combination of a socket having an insulated contact-brush, said socket and brush being connected to the poles of a suitable supply, and a lamp for insertion in said socket, the wick-holder of which lamp is adapted to complete the circuit between said socket and brush, whereby the lamp is ignited.

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